

List of All Chemicals

P Curcuma xanthorrhiza (Zingiberaceae)

Common name(s)

Temu Lawak; Javan Turmeric

How used

Medicinal

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Chemical	Plant Part	Low PPM	High PPM	StdDev	*Reference
ALNUSTONE	Rhizome	--	--		*
ALPHA-PHELLANDRENE	Rhizome	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Activities (11)					
Antibacterial					Wright,C.W.(Ed)2002.Medicinal&Aromatic Plants-Industrial Profiles.Artemisia.344pp.Maffei,M.(Ed)2002.Vetiveria.The Genus Vetiveria.Taylor&Francis.NY,NY.191pp.Southwell,I.,Lowe,R.(Eds)1999.Tea Tree.The Genus Melaleuca.Harwood Acad.Pub.Amsterdam,Netherlands.
Antistaphylococcic					Wright,C.W.(Ed)2002.Medicinal&Aromatic Plants-Industrial Profiles.Artemisia.344pp.Maffei,M.(Ed)2002.Vetiveria.The Genus Vetiveria.Taylor&Francis.NY,NY.191pp.Southwell,I.,Lowe,R.(Eds)1999.Tea Tree.The Genus Melaleuca.Harwood Acad.Pub.Amsterdam,Netherlands.
Dermal					Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Emetic					
FFlavor FEMA 10-130					Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Fungicide					Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
Insectiphile					Pakistan Encyclopedia Planta Medica. 1986.
Irritant					Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Laxative					
Perfumery					Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Pesticide					
AR-CURCUMENE	Rhizome	--	--		*
Activities (3)					
Antirhinoviral IC50=1,750?					Denyer, C.V., Jackson, P., Loakes, D.M., Ellis, M.R., and Yound, D.A.B. Isolation of Antirhinoviral Sesquiterpenes From Ginger (<i>Zingiber officinale</i>). Journal of Natural Products, 57(5): 658-662, 1994.
Antiulcer IC45=100 mg/kg					Yamahara, J., et al. Stomachic principles in ginger. II. Pungent and anti-ulcer effects of low polar constituents isolated from ginger, the dried rhizoma of... <i>Yakugaku Zasshi</i> 112: 645-655 (1992).
Antiviral IC50=1,750?					Denyer, C.V., Jackson, P., Loakes, D.M., Ellis, M.R., and Yound, D.A.B. Isolation of Antirhinoviral Sesquiterpenes From Ginger (<i>Zingiber officinale</i>). Journal of Natural Products, 57(5): 658-662, 1994.
ATLANTONE	Rhizome	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
BETA-CURCUMENE	Rhizome	--	--		*
BIS-(P-HYDROXY-CINNAMOYL)-METHANE	Rhizome	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
BIS-DESMETHOXYCUCUMIN	Rhizome	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
Activities (5)					
Antialzheimeran 0.5-10 ug/ml					
Antiamyloid-Beta 0.5-10 ug/ml					
Antiangiogenic					
Anticholeretic					HerbalGram No. 17.
Antiinflammatory					Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.
BORNEOL	Rhizome	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Activities (35)					
(-)Chronotropic 29 ug/ml					Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.

Allelochemical					
Analgesic					
Antiacetylcholine	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp.				
Antibacterial MIC=125-250 ug/ml					
Antibronchitic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.				
Antiescherichic MIC=125 ug/ml					
Antifeedant					
Antiinflammatory					
Antitotic					
Antipyretic					
Antisalmonella					
MIC=125 ug/ml					
Antispasmodic ED50=0.008 mg/ml					
Antistaphylococcic MIC=250 ug/ml					
Antiyeast MIC=250 ug/ml					
CNS-Stimulant	List, P.H. and Horhammer, L. <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.				
CNS-Toxic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.				
Candidicide MIC=250 ug/ml					
Choleretic					
FLavor FEMA<1	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry				
Fungicide					
Hepatoprotective					
Herbicide IC50=470 mM	Lydon, J. & Duke, S., <i>The potential of pesticides from plants</i> , pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp.				
Herbicide IC50=470 uM	Keeler, R.F. and Tu, A.T. eds. 1991. <i>Toxicology of Plant and Fungal Compounds</i> . (<i>Handbook of Natural Toxins Vol. 6</i>) Marcel Dekker, Inc. NY. 665 pp.				
Inhalant	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.				
Insect-Repellent					
Insectifuge	Jacobson, M., <i>Glossary of Plant-Derived Insect Deterrents</i> , CRC Press, Inc., Boca Raton, FL, 213 p, 1990.				
Irritant	Rinzler, C. A. 1990. <i>The Complete Book of Herbs, Spices and Condiments. Facts on File</i> , New York. 199 pp.				
Myorelaxant	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp.				
Nematicide MLC=1 mg/ml	Shoyakugaku Zasshi, 44: 183.				
Perfumery	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.				
Pesticide					
Sedative	Medline (post 1990 searches filed in my computer)				
Tranquilizer					

CALCIUM-OXALATE Rhizome -- -- List, P.H. and Horhammer, L. *Hager's Handbuch der Pharmazeutischen Praxis*, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities (4)

Emetic
Inflammatory
Laxative
Lithogenic

CURCUMIN Rhizome 100.0 10000.0 -0.51 *

Activities (135)

12-Lipoxygenase-Inhibitor
5-Alpha-Reductase-Inhibitor
5-HETE-Inhibitor IC50=3-10 uM
5-Lipoxygenase-Inhibitor
8-HETE-Inhibitor IC40=3 uM
AntiCrohn's
AntiEBV IC50=5.4 uM
AntiHIV IC50=40 uM
Antidirenomacarcinogenic 50-200 mg/kg ipr rat
Antiaflatoxin IC50=81 uM
Antiaggregant

Antiamyloid-Beta	0.5-10 ug/ml
Antiangiogenic	
Antiarachidonate	
Antiarthritic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiasthmatic	
Antiatherosclerotic	0.4-20 mg/kg/day
Antibacterial	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Antibronchitic	
Anticancer	
Anticancer (Breast)	
Anticancer (Colon)	
Anticancer (Duodenum)	
Anticancer (Mammary)	50-200 mg/kg ipr rat
Anticancer (Skin)	
Anticancer (Stomach)	
Anticarcinogenic	
Anticataract	75 mg/kg orl rat
Anticholecystostic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Anticolic	
Anticollagenic	
Antieczemic	Iwu, M.M. 1993. Handbook of African Medicinal Plants. CRC Press, Boca Raton, FL 435 pp.
Antiedemic ED50=100.2 mg/kg orl mus (cf 78 for cortisone)	
Antiedemic ED50=48 mg/kg orl rat (cf 45 for cortisone)	
Antiedemic ED50=48 mg/kg orl rat (cf 48 for phenylbutazone)	
Antieicosanoid	
Antihepatotic	
Antiinflammatory 1,200 mg/man/day	
Antiinflammatory 1 uM	
Antiintegrase 40-150 uM	
Antiischemic	
Antileishmanic IC50=7.8 ug/ml	
Antileukemic	
Antileukotriene 170 mg/kg orl rat	
Antilipoperoxidant	
Antilithic 0.5% diet	
Antilymphomeric 0.4 mg/ml	Iwu, M.M. 1993. Handbook of African Medicinal Plants. CRC Press, Boca Raton, FL 435 pp.
Antilymphomeric 4 ug/ml	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingston, Edinburgh.
Antimelanomic 200 nM/kg orl mus	
Antimetastatic 200 nM/kg orl mus	
Antimutagenic	
Antinitrosaminic	
Antioxidant 1/3 BHA	
Antioxidant IC50=500 uM	
Antipapillomic	
Antiperoxidant	
Antiproliferant IC50=13 uM	
Antiprostaglandin 8.8 uM	
Antipsoriatic	
Antispasmodic	=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp
Antithrombotic	
Antithromboxane	
Antitumor	
Antitumor (Colon)	
Antitumor (Liver)	10 uM
Antitumor-Promoter	IC91=10 uM
Antiulcer orl rat	
Antiviral	IC50=5.4 uM
Apoptotic	150-2,000 ppm (diet) orl rat
Apoptotic	30-90 uM
COX-2-Inhibitor	10-20 uM

Cardiodepressant	=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp
Chelator IC50=500 uM	
Chelator Iron	
Chemopreventive	
Cholagogue	
Choleretic	HerbalGram No. 24, page 37.
Cyclooxygenase-Inhibitor	
Cytochrome-P450-Inhibitor	Pizzorno, J. 1998. Total Wellness. Prima Health, a division of Prima.
Cytotoxic 0.4-4 mg/ml	Iwu, M.M. 1993. Handbook of African Medicinal Plants. CRC Press, Boca Raton, FL 435 pp.
Cytotoxic IC50=1 ug/ml	
Cytotoxic IC50=25 uM	
DNA-Protective	
Deodorant	Iwu, M.M. 1993. Handbook of African Medicinal Plants. CRC Press, Boca Raton, FL 435 pp.
Detoxicant	
Dye	Merck 11th Edition
Expectorant 100 uM	
Fibrinolytic	
Fungicide	
Glutathionigenic 80 mg/kg igs rat	
Hepatoprotective 30 ppm	
Hepatoprotective 30 mg/kg/day	
Hypocholesterolemic 0.15% diet 7 wks	
Hypolipidemic 0.15% diet 7 wks	
Hypotensive	
IKB-kinase-Inhibitor	
IKK-Inhibitor	
IkappaB-alpha-Phosphorylation- Inhibitor	
Immunostimulant 40 mg/kg/5 wk orl rat	
Lipase-Inducer	
Litholytic 0.5% diet	
MDR-Inhibitor 1-55 uM	
MMP-9-Inhibitor 10 uM	
Maltase-Promoter	
Metal-Chelator	McEvily, A.J., Iyengar, R., and Gross, A.T. Inhibition of Polyphenol Oxidase by Phenolic Compounds. Phenolic Compounds in Food and Their Effects on Health, Ch.25.
Mucogenic 100 uM	
NF-kB-Inhibitor	
NO-Inhibitor	
NO-Scavenger	
Nematicide	
Neuroprotective 80 mg/kg igs rat	
Ornithine-Decarboxylase- Inhibitor ED=~150 mg/kg	
P450-Inhibitor IC50=2-14 ug/ml	
PGE2-Inhibitor IC42=3 uM	
PTK-Inhibitor 5-100 uM	
Pesticide	
Phototoxic	Iwu, M.M. 1993. Handbook of African Medicinal Plants. CRC Press, Boca Raton, FL 435 pp.
Plasmodicide	
Prostaglandin-Synthesis- Inhibitor 0.2% diet rat	Rao, C. V., Rivenson, A., Simi, B., Reddy, B. S. 1995. Chemoprevention of Colon Carcinogenesis by Dietary Curcumin, a Naturally Occurring Plant Phenolic Compound. Cancer Research, 55(2): 259-266.
Protease-Inhibitor IC50=11-250 uM	
Protein-Kinase-C-Inhibitor IC69=15 uM	
Protein-Kinase-C-Inhibitor IC50=15 uM	
Protein-Kinase-Inhibitor	
Pulmonoprotective 200 mg/kg/ d	
Quinone-Reductase-Inducer 3.4 uM	Singletary, K., et al. 1998. Effect of the Beta-Diketones Diferoloylmethane (Curcumin) and Dibenzoylmethane on Rat Mammary DNA Adducts and Tumors Induced by 7,12-dimethylbenz(A)anthracene. Carcinogenesis, 19(6): 1039-1043.
Radioprotective	
Sortase-A-Inhibitor IC50=13-14 ug/ml	
Sucrase-Promoter	
TNF-Inhibitor	
Topoisomerase-I-Inhibitor	

Ulcerogenic orl rat

VEGF-Inhibitor

CURCUMINOIDS

Rhizome 8000.0 20000.0 -1.0 *

Activities (9)

Anticancer	Wichtl, M. 1984. <i>Teedrogen. Ein Handbuch für Apotheker und Ärzte.</i> Wissenschaftliche Verlagsgesellschaft mbH Stuttgart. 393 pp.
Antiinflammatory	Wichtl, M. 1984. <i>Teedrogen. Ein Handbuch für Apotheker und Ärzte.</i> Wissenschaftliche Verlagsgesellschaft mbH Stuttgart. 393 pp.
Antileukotriene	Wichtl, M. 1984. <i>Teedrogen. Ein Handbuch für Apotheker und Ärzte.</i> Wissenschaftliche Verlagsgesellschaft mbH Stuttgart. 393 pp.
Antimitotic	Wichtl, M. 1984. <i>Teedrogen. Ein Handbuch für Apotheker und Ärzte.</i> Wissenschaftliche Verlagsgesellschaft mbH Stuttgart. 393 pp.
Antiprostaglandin	Bisset, N.G., ed. 1994. <i>Herbal Drugs and Phytopharmaceuticals.</i> CRC Press. Boca Raton, FL. 566 pp.
Antitumor	Wichtl, M. 1984. <i>Teedrogen. Ein Handbuch für Apotheker und Ärzte.</i> Wissenschaftliche Verlagsgesellschaft mbH Stuttgart. 393 pp.
Cholagogue	Wichtl, M. 1984. <i>Teedrogen. Ein Handbuch für Apotheker und Ärzte.</i> Wissenschaftliche Verlagsgesellschaft mbH Stuttgart. 393 pp.
Cytotoxic	Wichtl, M. 1984. <i>Teedrogen. Ein Handbuch für Apotheker und Ärzte.</i> Wissenschaftliche Verlagsgesellschaft mbH Stuttgart. 393 pp.
Ulcerogenic?	Wichtl, M. 1984. <i>Teedrogen. Ein Handbuch für Apotheker und Ärzte.</i> Wissenschaftliche Verlagsgesellschaft mbH Stuttgart. 393 pp.

D-CAMPHOR Rhizome 500.0 2950.0 1.35 List, P.H. and Horhammer, L., *Hager's Handbuch der Pharmazeutischen Praxis*, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

DESMETHOXYCURCUMIN Plant 100.0 10000.0 *

DESMETHOXYCURCUMIN Rhizome 100.0 10000.0 -0.27 *

EO Rhizome 30000.0 295000.0 3.67 *

FURANODIENE Rhizome -- -- *

FURANODIENONE Rhizome -- -- *

GERMACRENE Rhizome -- -- *

ISOFURANOGERMACRENE Rhizome -- -- List, P.H. and Horhammer, L., *Hager's Handbuch der Pharmazeutischen Praxis*, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

L-CYCLOISOPRENEMYRCENE Rhizome 42500.0 250750.0 List, P.H. and Horhammer, L., *Hager's Handbuch der Pharmazeutischen Praxis*, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

MONODESMETHOXYCURCUMIN Rhizome -- -- List, P.H. and Horhammer, L., *Hager's Handbuch der Pharmazeutischen Praxis*, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

P-TOLYMETHYCARBINOL Rhizome 2500.0 4000.0 List, P.H. and Horhammer, L., *Hager's Handbuch der Pharmazeutischen Praxis*, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

STARCH Rhizome 300000.0 400000.0 -0.22 *

Activities (5)

Absorbent	Martindale's 29th
Antidote (Iodine)	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Antinesidioblastosic	Martindale's 29th
Emollient	Martindale's 29th
Poultice	Martindale's 29th

TURMERONE Rhizome -- -- List, P.H. and Horhammer, L., *Hager's Handbuch der Pharmazeutischen Praxis*, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities (4)

Choleretic	
Hepatotonic	
Insectifuge	Jacobson, M., <i>Glossary of Plant-Derived Insect Deterrents</i> , CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Pesticide	

XANTHORRHIZOL Rhizome -- -- List, P.H. and Horhammer, L., *Hager's Handbuch der Pharmazeutischen Praxis*, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

ZINGIBERENE Rhizome -- -- List, P.H. and Horhammer, L., *Hager's Handbuch der Pharmazeutischen Praxis*, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities (6)

Antirhinoviral	Mills, Simon and Bone, Kerry. 2000. <i>Phytotherapy.</i> Churchill Livingston, Edinburgh.
Antiulcer IC50=100 mg/kg	
Carminative	
Insecticide	Keeler, R.F. and Tu, A.T. eds. 1991. <i>Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6)</i> Marcel Dekker, Inc. NY. 665 pp.
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry

ZINGIBEROL

Rhizome -- --

List, P.H. and Horhammer, L. Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.